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Session: Infectious Disease Surveillance II

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Room: Ballroom

Impact of an infection control program on rates of device-associated infections in a Turkish hospitalE.E. Tutuncu^{*}, Y. Gurbuz, G. Cicek Senturk, I. Sencan

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Background: Healthcare-associated infections (HAIs) are a major global problem for patient safety, and are related to significantly increased morbidity, mortality, hospital stays, and costs. It's a well known fact that conducting organized surveillance and control programs can reduce HAI rates by more than 30%.

Methods & Materials: An infection control program was implemented in our 800-bed tertiary referral hospital in August 2005. In addition to educational programs, hand hygiene and isolation practices, prospective surveillance of device-associated infections (DAI) were started in intensive care units.

Results: The mean overall DAI rates in medical/surgical intensive care units in the year of 2006 were 34.5 for ventilator-associated pneumonia (VAP), 30.7 for catheter-associated urinary tract infection (CAUTI), and 5.6 for central line-associated blood stream infection (CLABSI), per 1000 device-days. Throughout seven years, with the increased awareness regarding infection control practices among health-care workers, DAI rates showed a distinct decline. As of 2012, DAI rates for VAP, CAUTI and CLABSI were 7.8, 6.3 and 2 infections per 1000 device-days, respectively.

Conclusion: Surveillance of HAIs and introducing infection control policies in our hospital efficiently reduced DAI rates and improved health-care quality.

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Surveillance of non-influenza viruses in Kenya, 2007–2011K. Mitei^{1,*}, W. Bulimo², R. Achilla², J. Majanja², M. Wadegu², B. Opot², F. Osuna³, S. Mukunzi², J. Muthoni⁴, S. Ochola¹, J. Mwangi², J. Njiri², E. Wurapa², R. Coldren²¹ USAMRU-Kenya, Nairobi, Kenya² USAMRU-K, Nairobi, Kenya³ Kenya medical research institute, Nairobi, Kenya⁴ US Army medical research unit, Kenya, Nairobi, Kenya

Background: Influenza like illness (ILI) is one of the leading causes of child mortality throughout the world, especially in the developing countries. Viruses are recognized as the predominant etiologic agents in ILI. However, in Kenya, few data are available, mainly about classic flu.

Methods & Materials: From 2007 to 2011, we conducted a laboratory-based surveillance; by collecting Nasopharyngeal swab specimens from consenting patients of at least 2 months of age, meeting the influenza-like-illness (ILI) case definition. A questionnaire was used to capture clinical and demographic data of the patients. Samples were snap frozen before transportation to the National Influenza center and stored at -70 °C before being inoculated into susceptible cell lines for isolation of respiratory viruses namely, adenoviruses (ADV), respiratory syncytial virus (RSV), human parainfluenza viruses (HPIV), Herpes simplex virus type1 (HSV1) and Enteroviruses. After incubation and observation for cytopathic effect, all samples were screened by direct or indirect immunofluorescence assay (IFA) using the Respiratory Panel I Viral Screening and Identification kit (Chemicon International, Inc.), for detecting antigens of the different viruses.

Results: We collected 14,990 nasopharyngeal swab samples from January 2007–October 2011. Respiratory pathogens were detected in 3,378 cases representing 22.5% of all samples. Amongst these, 1213 (35%) were influenza-positive and 2219 (65%) were positive for other respiratory viruses (viruses mentioned above). Among positive samples, 801 (23%) were Human Parainfluenza Viruses, 537 (16%) were Adeno viruses, 461 (13%) were Respiratory Syncytial Virus, 398 (12%) were Enteroviruses, 22 (1%) were Herpes Simplex virus 1. Analyses of dual infection showed that Adenoviruses and Enteroviruses are the most common co-infections with a total of 18 followed by HPIV/Enteroviruses and HPIV/Adenoviruses with a total of 13 cases each. RSV/HPIV viruses co-infection had a total 10 cases. There were also cases of dual infections amongst the HPIVs themselves; HPIV1/HPIV2, 16 cases, HPIV1/HPIV3 15 cases & HPIV2/HPIV3 having 15 cases each. There were 30 cases of triple infections of HPIV1/HPIV2/HPIV3.

Conclusion: These results confirm that other respiratory pathogens other than influenza may be involved in the etiology of ILI. Among them, Human Parainfluenza Viruses and Respiratory Syncytial Virus seems to be the most common.

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